UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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*Ex parte* DAVID J. BALABAN, ELINA KHURGIN, DEREK H. BERNHART, JOHN SOWATSKY, ARUN AGGARWAL, and LUIS JEVONS

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Appeal No. 2006-3105
Application No. 09/397,494
Technology Center 2800



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ON BRIEF

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Before KRASS, RUGGIERO, AND DIXON, *Administrative Patent Judges.*

DIXON, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. §134 from the Examiner's final rejection of claims 26-32, and 34-58 which are all of the claims pending in this application. Claims 1-25 and 33 have been canceled.

We AFFIRM.

## BACKGROUND

The Appellants' invention relates to a computer-based method for providing a laboratory information management system. An understanding of the invention can be derived from a reading of exemplary claim 26, which is reproduced below.

> 26. A method for a user interface to accept laboratory experiment information for control of a laboratory experiment, the method using a computer system, the computer system including a processing system coupled to a network, wherein a user input device, display device and processor are coupled to the processing system, the method comprising
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> accepting signals from the user input device to define a parameter of a probe array experiment;
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> transferring the parameter to the network;
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> receiving experiment results from the network, wherein the experiment results include results from the probe array experiment using the parameter; and
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> displaying the experiment results on the display device.

## PRIOR ART

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

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| WHEELESS, JR. et al. (WHEELESS) | 3,657,537 | Apr. 18, 1972 |
| WONG et al. (Wong) | 4,875,859 | Oct. 24, 1989 |
| DEHLINGER | 5,723,320 | Mar. 03, 1998 |
| LIPSHUTZ et al. (LIPSHUTZ) | 5,733,729 | Mar. 31, 1998 |

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| LAYNE et al. (LAYNE) | 5,968,731 | Oct. 19, 1999 (filed Dec. 10, 1996) |
| LAUGHON et al. (LAUGHON) | 6,046,165 | Apr. 04, 2000 (filed Jun. 23, 1997) |
| McCASKY FEAZEL et al. (McCASKY FEAZEL) | 6,100,030 | Aug. 08, 2000 (effective date Jan. 10, 1997) |

REJECTIONS

Rather than reiterate the conflicting viewpoints advanced by the Examiner and the Appellants regarding the above-noted rejections, we make reference to the Examiner's answer (mailed Mar. 22, 2006) for the reasoning in support of the rejection, and to Appellants' brief (filed Jan. 17, 2006) and reply brief (filed May 24, 2006) for the arguments thereagainst.

Claims 26, 31, and 34 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Layne in view Dehlinger. Claims 26-31, 34, 35, 36, 41, 42, 51, 52, 57, and 58 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel in view of Layne. Claims 32, 43, 44, 49, and 50 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel in view of Layne and further in view of Wong. Claims 37, 38, 53, and 54 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel in view of Layne and further in view of Laughon. Claims 39, 40, 55, and 56 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel in view of Layne and further in view of Lipshutz. Claims 39, 40, 55, and 56 stand

rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel in view of Layne and further in view of Wheeless. Claims 45 and 46 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel in view of Layne and Wong further in view of Laughon. Claims 47 and 48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel in view of Layne and Wong further in view of Lipshutz. Claim 32 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Layne in view of Dehlinger and further in view of Wong. Claims 47 and 48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over McCasky Feazel in view of Layne and Wong further in view of Wheeless.

## OPINION

In reaching our decision in this appeal, we have given careful consideration to Appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by Appellants and the Examiner. As a consequence of our review, we make the determinations that follow.

At the outset, we note that Appellants have grouped the claims corresponding to each of the separate rejections. We will address the arguments in the order presented in the Brief.

35 U.S.C. § 103

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). A *prima facie* case of obviousness is established by presenting evidence that the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed combination or other modification. See In re Lintner, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972). Furthermore, the conclusion that the claimed subject matter is *prima facie* obvious must be supported by evidence, as shown by some objective teaching in the prior art or by knowledge generally available to one of ordinary skill in the art that would have led that individual to combine the relevant teachings of the references to arrive at the claimed invention. See In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Rejections based on § 103 must rest on a factual basis with these facts being interpreted without hindsight reconstruction of the invention from the prior art. The Examiner may not, because of doubt that the invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in the factual basis for the rejection. See In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 177 (CCPA 1967), cert.denied, 389 U.S. 1057 (1968). Our reviewing court has repeatedly cautioned against employing hindsight by using the appellant's disclosure as a blueprint to reconstruct the claimed invention from the isolated teachings of the prior art. See, *e.g.*, Grain Processing Corp. v. American Maize-Prods. Co., 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988).

When determining obviousness, "the [E]xaminer can satisfy the burden of showing obviousness of the combination 'only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.'" In re Lee, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002), citing In re Fritch, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 992). "Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.'" In re Dembiczak, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). "Mere denials and conclusory statements, however, are not sufficient to establish a genuine issue of material fact." Dembiczak, 175 F.3d at 999-1000, 50 USPQ2d at 1617, citing McElmurry v. Arkansas Power & Light Co., 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993).

Further, as pointed out by our reviewing court, we must first determine the scope of the claim. "[T]he name of the game is the claim." In re Hiniker Co., 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998). Therefore, we look to the limitations as recited in independent claim 26. From our review of the Examiner's rejection, we find that the teachings of Layne alone would have been sufficient to suggest the invention as recited in independent claim 26. While the Examiner relies upon the teachings of Dehlinger to teach that the probe is part of a probe array, we find that the Examiner is interpreting the probe array too specifically. We find no limitation beyond the scope taught by Layne which teaches an array of probes. We agree with the Examiner that

Layne teaches all of the limitations recited in independent claim 26 including the probe array experiment. The Summary of the Invention of Layne teaches that the process controller translates user commands into test suite commands and for communicating results to the user. In column 8 of Layne, the discussion of Figure 4 teaches the use of a remote automated testing and analysis capability and the use of the Internet. The communication to the remote lab includes instructions enabling program control tools to define and perform automated tests. Therefore, we find that Layne alone teaches and fairly suggests the method of independent claim 26. Furthermore, the Examiner has combined the teachings of Dehlinger with respect to the use of a "probe array" which is more akin to that which Appellants disclose in the specification. We agree with the Examiner that it would have been obvious to one skilled in the art at the time of the invention to have implemented the methodology of Layne with various probes and their corresponding experiments since this does not change the method, but only the range of experiments that the method may be adapted to control. Here, we find that the Examiner has established a *prima facie* case of obviousness for the combined teachings of Layne and Dehlinger. Therefore, we look to Appellants' briefs to identify an error in the Examiner's *prima facie* case.

> Appellants argue that the
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> probe array experiments performed in accordance with the claimed embodiments utilize a radically different technology that differs in significant ways from the robotic microtiter technology of Layne et al. '731. One important difference between these technologies, is the vastly increased data volumes data expected to result from the probe array experiments conducted in accordance with the present invention. For example, while Layne et al. '731 describe an experiment comprising at most ninety-six (96) wells at a time, Dehlinger '320 describes experiments in which data is simultaneously collected from large arrays comprising thousands of probes (Br. 6).

We do not find to be persuasive Appellants' arguments that the experiments and their results would have been beyond the knowledge and level of skill of those skilled in the art, and we find that it would have been obvious to one skilled in the art at the time of the invention that the method of independent claim 26 could be applied to a wide range of experiments and results therefrom.

Appellants' argument goes to the combinability of the two teachings and that it would not have been obvious to one skilled in the art at the time of the invention to have combined the teachings due to the order of magnitude of difference in the amount of data that Appellants maintain is transmitted over the network. We find that argument alone to be unpersuasive since we find no express limitation in the language of independent claim 26 as to the type of probe, type of probe array experiment, the network or any other facet of the system which would limit the extension of the method to other experiments, which have varied or increased amounts or types of experiment results data.

We find that Layne teaches that the communication link 126 is the message transfer modality commonly known as the Internet which is well suited for the application described in Layne and offers global accessibility and high-speed data transfer of "vast amounts of information." (Layne at col. 10, ll. 16-17.) We find this teaching and suggestion for communication to be a sufficient suggestion to increase the amount of data transferred over the communication link. Therefore, we do not find Appellants' argument of a difference in magnitude of amount of data transmitted from the probe array or probe array experiment to be persuasive.

Appellants argue that the Examiner's rejection is based upon hindsight (Br. 7). We disagree with Appellants, as discussed above. We do not find that utilizing the capacity of the communication channel to be an indication of hindsight as Appellants contend. Therefore, Appellants' argument is not persuasive.

Appellants argue that the instant application is replete with teachings and suggestions to communicate the results of probe array experiments over a network (Br. 7). We find this argument irrelevant to the issue of whether the Examiner's rejection is in error or whether the Examiner has made an unreasonable interpretation of claim limitations. Therefore, Appellants' argument is not persuasive.

With respect to the communication of large volumes of data over a network as argued in the Reply Brief at page 4, we agree with Appellants that the "10,000 separate tasks" of Layne does not necessarily correlate to 10,000 data points. We agree with Appellants that the tasks of Layne may range through all of the steps of a experiment and that the portion of the reference referenced by the Examiner does not address the data transmitted. Yet, we do find that the teachings of Layne with respect to the use of the Internet and the graphical and multimedia communications clearly indicate that the medium of the internet clearly has the capacity to handle vast amounts of data, as discussed above. Appellants argue that the Examiner has not supported the reliance on that the high-speed data transmission over a computer network was well-known (Reply Br. 5). We disagree with Appellants and find that Layne clearly teaches and suggests such high-speed communication over a computer network. With respect to the 10-fold and 100-fold or more volume of data (Reply Br. 5), we find no express support in the

language of independent claim 26 to support this argument. Therefore, Appellants' argument is not persuasive.

With respect to Appellants' argument that it would not have been obvious to one skilled in the art at the time of the invention that communication of technical medical data over long distances to remote locations having minimal technical infrastructure could be easily achieved (Reply Br. 6), again we find no express support in the language of independent claim 26 to support this argument. Therefore, Appellants' argument is not persuasive.

Since Appellants have not shown error in the Examiner's *prima facie* case of obviousness, we will sustain the rejection of independent claim 26 and claims 31 and 34 which are grouped therewith.

With respect to independent claim 32, the Examiner additionally relies upon the teachings of Wong to teach guiding a user through set up of a test. Appellants argue that Wong contains no specific teaching concerning communication of data from a probe array experiment over a network nor does it provide any motivation to combine with any of the teachings of Layne or Dehlinger (Br. 8). We find that Layne teaches adequate communication for multimedia formats and visual depiction of results data. (Layne at col. 11, ll. 30-45.) Again, we find that the teachings of Layne alone would have been sufficient to meet the two steps recited in the method of independent claim 32. As long as Layne teaches the display of steps of set up and execution and at least a single end result of the experiment, we find that Layne teaches the claimed invention. The

Examiner has additionally relied upon the teachings of Dehlinger as we have addressed above and do not find that Appellants have shown error in this combination. The Examiner's reliance upon the teachings of Wong with respect to having a more flexible and user friendly interface for set up and display seems to be an obvious improvement in the interface of Layne. While we find that Layne alone teaches the recited limitations, we find the Examiner's reliance upon the express teachings of Wong to more clearly teach and suggest the interface that we find suggested in Layne at col. 11, ll. 39-46 to be well founded. Therefore, Appellants' argument is not persuasive.

In the Reply Brief at pages 6-7, Appellants again reiterate the argument that it would have been obvious to one skilled in the art at the time of the invention to have combined the teachings of the references applied. Again, we do not find this argument persuasive, as discussed above.

Since Appellants have not shown error in the Examiner's *prima facie* case of obviousness, we will sustain the rejection of independent claim 32 and the claims grouped therewith.

With respect to independent claim 26 and the combination of McCasky Feazel and Layne, Appellants maintain that Layne does not provide any teaching or suggestion of communicating data from a probe array experiment over a computer network and Layne is limited to conventional robotic microtiter experimental techniques. As discussed above, we find no express limitation in independent claim 26 to distinguish over Layne and Appellants have not identified any express definition in the specification which would distinguish over the conventional robotic microtiter experiment results

taught by Layne. Therefore, Appellants' argument is not persuasive. Appellants argue that the addition of Layne does nothing to supply this absent teaching (Br. 8). We assume that Appellants intended to state McCasky Feazel rather than Layne. Appellants maintain that the probe array experimental techniques of McCasky Feazel and Dehlinger stand in stark contrast to the conventional microtiter technology employed by Layne (Br. 9). We do not find this argument commensurate in scope with the language of independent claim 26 which does not address the details of the experiment, the hardware probe structure used in the experiment, or the quantity of data in the results. Therefore, Appellants' argument is not persuasive. Therefore, we do not find that Appellants have adequately rebutted the *prima facie* of obviousness and have not shown that the Examiner relied upon impermissible hindsight, and we will sustain the rejection of independent claim 26 and its dependent claims.

With respect to the Appellants' headings D-J and Appellants' groupings, Appellants rely upon the arguments previously made with respect to independent claims 26 and 32 and to the combination of the references and the quantity of results from the experiment (Br. 9-12). We have addressed those arguments above and have not found them persuasive. Therefore, Appellants general reliance thereon does not persuade us of error in the Examiner's *prima facie* case of obviousness.

## CONCLUSION

To summarize, the rejection of claims 26-32 and 34-58 under 35 U.S.C. § 103 is sustained.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

ERROL A. KRASS
Administrative Patent Judge

JOSEPH F. RUGGIERO
Administrative Patent Judge

JOSEPH L. DIXON
Administrative Patent Judge

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